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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,732	05/30/2001	Yukihiko Shirakawa	209211US0	7133

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EXAMINER

HARPER, HOLLY R

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,732

Applicant(s)

SHIRAKAWA, YUKIHIKO

Examiner

Holly R. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Amendment A, filed 30 May 2001 has been entered.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-3, drawn to an EL device, classified in class 313, subclass 509.
 - II. Claims 4-5, drawn to a method of manufacturing, classified in class 427, subclass 66.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the dielectric layer could be formed by vapor deposition instead of by repeated coating-and-firing.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and divergent subject matter, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Fredrick Vastine on 2/19/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-3. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4-5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizukami et al. (USPN 4,188,565) hereinafter "Mizukami".

Regarding claims 1 and 3, the Mizukami reference discloses a thin film electroluminescent device with a glass substrate, transparent electrodes, multi-layer dielectric layer, electroluminescent layer, and aluminum electrodes (Column 2, Lines 50-53 and Column 4, Lines 66-6). The arrangement of the electrodes is affected by the way the EL device is oriented for the viewer. Regardless, the transparent electrode is placed closest to the viewer to allow more light to pass. It has been held that rearranging of parts of an invention involves only routine skills in the art. Thus, it would have been obvious to one having ordinary skills in the art the time the invention was made to place the transparent electrode closest to the viewer, since rearrangement of parts of an invention is considered within the skills of the art.

The multi-layer dielectric layer is a thickness of .1-10 microns (Column 4, Lines 21-23). The Mizukami reference does not specify the thickness of the electrodes. It is known in the art to make electrodes significantly thinner than the dielectric layer. For example, Fujita et al. (USPN 4,547,703) discloses that the electrodes are 40-70 nm thick and has a comparable thickness for the dielectric layers. The dielectric layer thickness is more than four times the thickness of the electrode layer. The layers comprising the multi-layer dielectric layer are

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considered to be equal thickness and therefore, the thickness of each sublevel is at least half of the thickness of the electrode layer.

The Examiner notes that the claim limitation that “multiplayer dielectric layer formed in a multi-layer form by repeating a solution coating-and-firing step plural times “ is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113). Therefore, it is the position of the examiner that it would have been obvious to one of ordinary skill in the art that the multi-layer dielectric layer disclosed by Mizukami is at least a fully functional equivalent to the Applicant’s claimed multi-layer dielectric layer as evidenced by the suggestion of all of the Applicant’s claimed structural limitations.

Regarding claim 1, here the Applicant is claiming the product of a multi-layer dielectric layer in an EL device including a method (i.e. a process) of making the multi-layer dielectric layer, consequently, part of claim 1 is considered “product-by-process” claim. In spite of the fact that a product-by-process claim may recite only process limitations, it is the product and not the recited process that is covered by the claim. Further, patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. As such, no patentable weight has been given to the process recited in claim 1 (see MPEP 2113).

The Examiner notes that the claim limitation that “multiplayer dielectric layer formed in a multi-layer form by repeating a solution coating-and-firing step at least three times “ is drawn

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to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation.

Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113). Therefore, it is the position of the examiner that it would have been obvious to one of ordinary skill in the art that the multi-layer dielectric layer disclosed by Mizukami is at least a fully functional equivalent to the Applicant's claimed multi-layer dielectric layer as evidenced by the suggestion of all of the Applicant's claimed structural limitations.

Regarding claim 2, here the Applicant is claiming the product of a multi-layer dielectric layer in an EL device including a method (i.e. a process) of making the multi-layer dielectric layer, consequently, claim 2 is considered "product-by-process" claim. In spite of the fact that a product-by-process claim may recite only process limitations, it is the product and not the recited process that is covered by the claim. Further, patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. As such, no patentable weight has been given to the process recited in claim 2 (see MPEP 2113).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hora (USPN 6,107,735) and Wu (USPN 5,432,015) teach that the patterned electrodes are next to the substrate and the transparent electrodes are furthest away.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879



VIP PATEL
PRIMARY EXAMINER